

NEW NAMES AND NEW COMBINATIONS IN THE GENUS *EUPHORBIA* L. (EUPHORBIACEAE)

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ABSTRACT

New names and combinations are published for *Euphorbia* in anticipation of future publication of a listing of all names applied to the tribe Euphorbieae (Euphorbiaceae).

KEY WORDS: Euphorbiaceae, *Euphorbia*, nomenclature.

During the preparation of a world list of all species names published in the tribe Euphorbieae (Euphorbiaceae) with their distribution (Oudejans, in preparation), several new names and new combinations appeared to be necessary. The list will contain over 10,000 names, including synonyms, misspellings, etc. Prior to the publication of the list, for better accessibility, all name changes will be published in this paper.

Currently, the tribe contains the following genera: *Euphorbia* L., *Monadenium* Pax, *Synadenium* Boissier, *Endadenium* Leach, *Neoguillauminia* Croizat, *Pedilanthus* Poiteau, *Anthostema* Adr. Jussieu, *Dichostemma* Pierre, *Calycopeplus* Planchon and *Cubanthus* Millspaugh.

All other genera will be treated in my world list as synonyms or subgenera of the genera mentioned. This holds particularly for *Chamaesyce* Rafinesque and *Tithymalus* Gaertner, which are considered as separate genera by several authors (for instance, Soják 1983; Koutnik 1987), whereas others include them in the genus *Euphorbia* L. (for instance, Radcliffe-Smith 1986; Carter 1988). In my opinion, for stability of nomenclature, the best solution is accepting these names as subgenera, until the tribe Euphorbieae can be studied on a world basis. Most problems of interpretation originate from the vast distribution of the genus *Euphorbia* L. over all continents with so many pantropic weedy species and different growth forms, resulting in publication of new species and genera on a basis too limited for "correct" concepts accepted universally.

- Euphorbia adenoptera** Bertoloni subsp. *gundlachii* (Urban) Oudejans, comb. nov. Basionym: *E. gundlachii* I. Urban, Symb. Antill. 5:392-393. 1908.
- Euphorbia adenoptera** Bertoloni subsp. *pergamena* (Small) Oudejans, comb. nov. Basionym: *E. pergamena* J.K. Small, Bull. Torrey Bot. Club 25:615-616. 1898.
- Euphorbia alainii** Oudejans, nom. nov., pro *Chamaesyce montana* H. Alain [=A.H. Liogier], Moscosoa 1(1):25-26. 1976. The epithet *montana* is not available in the genus *Euphorbia*. TYPE: REPUBLICA DOMINICANA. En Pinar, Alto del Toro, Sierra de Bahoruco, 2200 m, *Alain & Perfa Liogier 19712*.
- Euphorbia amandi** Oudejans, nom. nov., pro *E. minuta* R.A. Philippi, Anales Mus. Nac. Chile (secc. 2, Bot.) 8:76. 1891. TYPE: CHILE. habitat in Tarapacá, de Cacalhuay advecta. Non *E. minuta* F. Loscos y Bernal & J. Pardo y Sastron, Ser. Inconf. Pl. Arag. 96. 1863.
- Euphorbia antonii** Oudejans, nom. nov., pro *E. lanceolata* D.A. Larrañaga, Escritos D.A. Larrañaga 2:164. 1923. TYPE: [URUGUAY.] Julio 21 de 1809. Non *E. lanceolata* K.[P.J.] Sprengel, Fl. Halens. Mant. 41-42. 1807.
- Euphorbia barnesii** (Millspaugh) Oudejans, comb. nov. Basionym: *Adenopetalum barnesii* C.F. Millspaugh, Field Mus. Nat. Hist., Bot. Ser. 2:377. 1913.
- Euphorbia blatteri** Oudejans, nom. nov., pro *E. helioscopioides* E. Blatter, J. Bombay Nat. Hist. Soc. 36:483. 1933. TYPE: S. Waziristan, Sararogha, 4000 ft, *Fernandez 105*. Non *E. helioscopioides* F. Loscos y Bernal & J. Pardo y Sastron, Ser. Inconf. Pl. Arag. 93. 1863.
- Euphorbia bruntii** (Proctor) Oudejans, comb. nov. Basionym: *Chamaesyce bruntii* G.R. Proctor, Sloanea 1:2. 1977.
- Euphorbia celastroides** Boissier in DC var. *tomentella* (Boissier in DC) Oudejans, comb. nov. Basionym: *E. multiformis* Hooker & Arnott var. *tomentella* [P.]E. Boissier in A.P. de Candolle, Prodr. 15(2):12. 1862.
- Euphorbia chapmanii** Oudejans, nom. nov., pro *E. nudicaulis* A.W. Chapman, Fl. South. U.S. (ed. 1) 402. 1860. TYPE: UNITED STATES. near St. Joseph's, west Florida. Non *E. nudicaulis* G. Perrottet, Mem. Soc. Linn. Paris 3(1):116. 1826 (also as preprint 1824).
- Euphorbia chiogenes** (Small) Oudejans, comb. nov. Basionym: *Chamaesyce chiogenes* J.K. Small, Fl. Southeast. U.S. 709,1333. 1903.
- Euphorbia conferta** (Small) Oudejans, comb. nov. Basionym: *Chamaesyce conferta* J.K. Small, Fl. Southeast. U.S. 713-714. 1903. Earlier combinations made by B.E. Smith (1946) and E. Jablonski (1974) are invalid.

- Euphorbia cordatella*** Oudejans, nom. nov., pro *E. cordata* D.A. Larrañaga, Escritos D.A. Larrañaga 2:164. 1923. TYPE: [URUGUAY.]
Abril 5 de 1814. Non *E. cordata* F. von Paula von Schrank, Baier. Fl. 1:747. 1789.
- Euphorbia cowellii*** (Millspaugh ex Britton) Oudejans, comb. nov. Basionym: *Chamaesyce cowellii* [C.F.] Millspaugh ex N.L. Britton, Bull. Torrey Bot. Club 43:457. 1916.
- Euphorbia cumulicola*** (Small) Oudejans, comb. nov. Basionym: *Chamaesyce cumulicola* J.K. Small, Man. Southeast. Fl. 794,1505. 1933.
- Euphorbia damasoi*** Oudejans, nom. nov., pro *E. ovata* D.A. Larrañaga, Escritos Larrañaga, 2:164. 1923. TYPE: URUGUAY. Feb 25 de 1812. Non *E. ovata* E. Meyer ex [P.]E. Boissier in A.P. de Candolle, Prodr. 15(2):167. 1862.
- Euphorbia deltoidea*** Engelmans ex Chapman var. *serpyllum* (Small) Oudejans, comb. nov. Basionym: *Chamaesyce serpyllum* J.K. Small, Fl. Florida Keys 81. 1913.
- Euphorbia denisii*** Oudejans, nom. nov., pro *E. obcordata* M. Denis, Euphorb. Iles Austr. Afr. 56. 1921. TYPE: MADAGASCAR. Région de Sud-Ouest, bassin de l'Onilany, *Perrier de la Bâthie 9785*. Non *E. obcordata* [I.]B. Balfour, Proc. Roy. Soc. Edinburgh 12:93. 1882-1883.
- Euphorbia donii*** Oudejans, nom. nov., pro *E. longifolia* D. Don, Prodr. Fl. Nepal 62. 1825. TYPE: hab. in Nepalia, *Hamilton [s.n.]*. Non *E. longifolia* J.B.A.P.M. de Lamarck, Encycl. 2:417. 1788.
- Euphorbia dubovikii*** Oudejans, nom. nov., pro *E. pinetorum* Dubovik ex O.N. Dubovik & M.V. Klovov, Novosti Sist. Vyssh. Inzsh. Rast. (Kiev) 1976:105-107. 1977. TYPE: Dit. Krasnodarensis, prope Gelendzhik, p. Archipo-Ossipovka, *O. Dubovik [s.n.]*. Non *E. pinetorum* (Small) G.L. Webster, J. Arnold Arbor. 48:403. 1967.
- Euphorbia duckei*** (Croizat) Oudejans, comb. nov. Basionym: *Chamaesyce duckei* L. Croizat, J. Arnold Arbor. 24:185-186. 1943.
- Euphorbia georgei*** Oudejans, nom. nov., pro *E. acuta* G. Engelmans in W.H. Emory, Rep. U.S. Mex. Bound. 2(1):189. 1858. TYPE: UNITED STATES. Texas: stony prairies western Texas, along the San Pecos rivers, &c. *Bigelow [s.n.]*, *Schott [s.n.]*, *Wright 1739,1749*. Non *E. acuta* Bellard ex A. Colla, Herb. Pedem. 5:132. 1836.
- Euphorbia graminifolia*** Villars subsp. *tommasiniana* (Bertoloni) Oudejans, comb. nov. Basionym: *E. tommasiniana* A. Bertoloni, Fl. Ital. 5(1):78-79. 1842.
- Euphorbia graminifolia*** Villars subsp. *zhiguliensis* (Prokhanov) Oudejans, comb. nov. Basionym: *Galarrhoeus* ('*Galarrhoeus*') *zhiguliensis* Ya.I. Prokhanov, Tr. Kuibyshevsk. Bot. Sada 1:64-68. 1941.

- Euphorbia hamiltonii* Oudejans, nom. nov., pro *E. angustifolia* Hamilton ex D. Don, Prodr. Fl. Nepal 62. 1825. TYPE: hab. ad Norcoteria Nepalensium, *Hamilton* [s.n.]. Non *E. angustifolia* (Haworth) E.G. von Steudel, Nomencl. (ed. 1) 323. 1821.
- Euphorbia heraldiana* (Millspaugh) Oudejans, comb. nov. Basionym: *Chamaesyce heraldiana* C.F. Millspaugh, Field Mus. Nat. Hist., Bot. Ser. 2:409. 1916.
- Euphorbia herbstii* (Wagner) Oudejans, comb. nov. Basionym: *Chamaesyce herbstii* W.L. Wagner, Bishop Mus. Occas. Pap. 28:75-76. 1988.
- Euphorbia hiernii* (Croizat) Oudejans, comb. nov. Basionym: *Elaeophorbia hiernii* L. Croizat, Desert Pl. Life 8:102-103. 1936.
- Euphorbia hurusawae* Oudejans, nom. nov., pro *E. barbellata* I. Hurusawa, J. Jap. Bot. 16:571-572. 1940. TYPE: CHINA. hab. in Manshuria, prov. Kwantung, in monte Dai-osyo-zan, *M. Nishimura* [s.n.]. Non *E. barbellata* G. Engelmann in W.H. Emory, Rep. U.S. Mex. Bound. 2(1):190. 1858.
- Euphorbia hurusawae* Oudejans var. *imaii* (Hurusawa) Oudejans, comb. nov. Basionym: *E. imaii* I. Hurusawa, J. Jap. Bot. 16:576-577. 1940.
- Euphorbia inaguaensis* Oudejans, nom. nov., pro *E. abbreviata* D.S. Correll, Sida 8(4):317-319. 1980. TYPE: BAHAMA ISLANDS. Little Inagua, *D.S. Correll 45998*. Non *E. abbreviata* J.L. Thuillier, Fl. Paris (ed. 2) 239. 1799.
- Euphorbia josei* Oudejans, nom. nov., pro *E. litoralis* M. [de] Sessé [y Lacasta] & J.M. Moñino, Fl. Mexic. (ed. 2) 123. 1894. TYPE: habitat ad litora maris insulae de Puerto Rico. Non *E. litoralis* C.S. Kunth in Humboldt, Bonpland & Kunth, Nov. Gen. Sp. 2:54. 1817.
- Euphorbia klotzschii* Oudejans, nom. nov., pro *E. ovalifolia* (Engelmann ex Klotzsch) [P.]E. Boissier in A.P. de Candolle, Prodr. 15(2):43. 1862. TYPE: CHILE: hab. in Chili prope Santiago [Santjago] et Atacama, *Philippi* [s.n.]. Non *E. ovalifolia* V.F. Kosteletzky, Allg. Med. Pharm. Fl. 5:1724. 1836.
- Euphorbia larranagae* Oudejans, nom. nov., pro *E. rupestris* D.A. Larrañaga, Escritos D.A. Larrañaga 2:164. 1923. TYPE: [Uruguay]. Non *E. rupestris* C.A. Meyer ex C.F. Ledebour, Icon. Pl. Fl. Ross. 2:26. 1830.
- Euphorbia leoncroizatii* Oudejans, nom. nov., pro *E. croizatii* (Hurusawa) M. Kitagawa, J. Jap. Bot. 31:304 (as '*Croizatii*'). 1956. TYPE: CHINA: hab. Manshuria, prov. Fengtien. Non *E. croizatii* J. Leandri, Notulae Syst. 12:160-161 (as '*Croizati*'). 1946

- Euphorbia limaensis*** Oudejans, nom. nov., pro *E. inornata* (Dressler) A. Radcliffe-Smith, Kew Bull. 32:482. 1978. TYPE: PERÚ. Dept. & Prov. Lima, Distr. Pachacamac, Atacongo, 195 m, *Ynes Mexia 04044*. Non *E. inornata* N.E. Brown in W.T. Thiselton-Dyer, Fl. Cap. 5(2):585. 1925.
- Euphorbia lutulenta*** (Croizat) Oudejans, comb. nov. Basionym *Chamaesyce lutulenta* Croizat, J. Arnold Arbor. 26:195-196. 1945.
- Euphorbia marianoii*** Oudejans, nom. nov., pro *E. pulchella* M. [de] Sessé [y Lacasta] & J.M. Moçino, Pl. Nov. Hisp. (ed. 1) 81. 1888 ('1887'). TYPE: [MÉXICO?]. habitat in oppidis Ario et Uruapum. Non *E. pulchella* M. Lagasca [y Segura] & J. Rodriguez, Anales Cienc. Nat. (Madrid) 5:71-72. 1802.
- Euphorbia mazatlamensis*** Oudejans, nom. nov., pro *E. triflora* M. [de] Sessé [y Lacasta] & J.M. Moçino, Pl. Nov. Hisp. (ed. 1) 81. 1888 ('1887'). TYPE: MÉXICO. habitat in Mazatlam. Non *E. triflora* H. Schott, C.F. Nyman & Th. Kotschy, Analecta Bot. 63-64. 1854.
- Euphorbia mocinoii*** Oudejans, nom. nov., pro *E. peltata* M. [de] Sessé [y Lacasta] & J.M. Moçino, Fl. Mexic. (ed. 2) 122. 1894. TYPE: MÉXICO. habitat in Oppido Nandio, prope Zitacuaurum. Non *E. peltata* W. Roxburgh, Fl. Ind. (ed. 2) 2:474. 1832.
- Euphorbia nicaensis*** Allioni subsp. *maleevii* (Tamamshyan) Oudejans, comb. nov. Basionym: *E. maleevii* S.G. Tamamshyan, Dokl. Akad. Nauk Armyansk. SSR 1(1-2):45-46 (as '*Maleevi*'). 1944.
- Euphorbia nicholasii*** Oudejans, nom. nov., pro *Elaeophorbia acuta* N.E. Brown in W.T. Thiselton-Dyer, Fl. Cap. 5(2):222. 1915. TYPE: SOUTH AFRICA. probably the Transvaal, *Burt-Davy [s.n.]*. The name *acuta* is not available in the genus *Euphorbia*.
- Euphorbia ocellata*** Durand & Hilgard subsp. *arenicola* (Parish) Oudejans, comb. nov. Basionym: *E. arenicola* S.B. Parish, Erythea 7:93. 1899.
- Euphorbia ocellata*** Durand & Hilgard subsp. *rattanii* (Watson) Oudejans, comb. nov. Basionym: *E. rattanii* S. Watson, Proc. Amer. Acad. Arts Sci. 20:372. 1885.
- Euphorbia orbifolia*** (Alain) Oudejans, comb. nov. Basionym: *Chamaesyce orbifolia* H. Alain [=A.H. Liogier], Phytologia 47:175-177. 1980.
- Euphorbia paredonensis*** (Millspaugh) Oudejans, comb. nov. Basionym: *Chamaesyce paredonensis* C.F. Millspaugh, Field Mus. Nat. Hist., Bot. Ser. 2:393-394. 1914.
- Euphorbia parodii*** Oudejans, nom. nov., pro *E. angustifolia* D. Parodi, Anales Soc. Cient. Argent. 11:49-50 (as *angustifolia*). 1881. TYPE: PARAGUAY. Igatimi in pratis. Non *E. angustifolia* (Haworth) E.G. von Steudel, Nomencl. (ed. 1) 323. 1821.

- Euphorbia porteriana** (Small) Oudejans, comb. nov. Basionym: *Chamaesyce porteriana* J.K. Small, Fl. Southeast. U.S. 711-712, 1333. 1903.
- Euphorbia porteriana** (Small) Oudejans var. **keyensis** (Small) Oudejans, comb. nov. Basionym: *Chamaesyce keyensis* J.K. Small, Torreya 28:6. 1928.
- Euphorbia porteriana** (Small) Oudejans var. **scoparia** (Small) Oudejans, comb. nov. Basionym: *Chamaesyce scoparia* J.K. Small, Fl. Florida Keys 81. 1913.
- Euphorbia radlkoferi** Oudejans, nom. nov., pro *E. gracilis* L.[A.] Radlkofer, Leafl. Philipp. Bot. 5(Art. 79):1606-1607. 1913. TYPE: PHILIPPINES. in Philippinarum insula Mindanao, Prov. Agusan, Cabadbaran, Mount Urdaneta, 4000 ped, A.D.E. Elmer 13482. Non *E. gracilis* J.L.A. Loiseleur-Deslongchamps, Fl. Gall. (ed. 1) 2:728. 1807.
- Euphorbia raphilippii** Oudejans, nom. nov., pro *E. lanceolata* R.A. Philippi, Anales Univ. Santiago 91:508. 1895. TYPE: [CHILE.] Habitat in Andibus Illapelinis loco dicto el Peñoa. Non *E. lanceolata* K.[P.J.] Sprengel, Fl. Halens. Mant. 41-42. 1807.
- Euphorbia rochaensis** (Croizat) Oudejans, comb. nov. Basionym: *Chamaesyce rochaensis* L. Croizat, J. Arnold Arbor. 26:195. 1945.
- Euphorbia rockii** Forbes var. **grandiflora** (Hillebrand) Oudejans, comb. nov. Basionym: *E. clusiiifolia* var. *grandiflora* W. Hillebrand, Fl. Hawaiian Isl. 395 (as 'clusiaefolia'). 1888.
- Euphorbia roschianica** (Ikonnikov) Oudejans, comb. nov. Basionym: *Tithymalus roschianicus* S.S. Ikonnikov, Novosti Sist. Vyssh. Rast. 15:220-221. 1979.
- Euphorbia rothrockii** (Millspaugh) Oudejans, comb. nov. Basionym: *Chamaesyce rothrockii* C.F. Millspaugh, Field Mus. Nat. Hist., Bot. Ser. 2:376-377. 1913.
- Euphorbia serpyllifolia** Persoon subsp. **hirtula** (Engelmann ex Watson) Oudejans, comb. nov. Basionym: *E. hirtula* [G.] Engelmann ex S. Watson, Bot. Calif. 2:74. 1880.
- Euphorbia sessei** Oudejans, nom. nov., pro *E. imbricata* M. [de] Sessé [y Lacasta] & J.M. Moçino, Fl. Mexic. (ed. 2) 123. 1894. TYPE: habitat ad litore maris prope Havanam. Non *E. imbricata* M. Vahl, Symb. Bot. 2:54-55. 1791.
- Euphorbia smallii** Oudejans, nom. nov., pro *Chamaesyce pinctorum* J.K. Small, Bull. N.Y. Bot. Gard. 3:429-430. TYPE: UNITED STATES. [Florida:] between Cutler and Camp Longview *Small & Carter 836*. The name *pinetorum* is not available in the genus *Euphorbia*.

- Euphorbia standleyi** (Millspaugh) Oudejans, comb. nov. Basionym: *Chamaesyce standleyi* C.F. Millspaugh, Field Mus. Nat. Hist., Bot. Ser. 2:404. 1916.
- Euphorbia tamaulipasana** (Millspaugh) Oudejans, comb. nov. Basionym: *Chamaesyce tamaulipasana* C.F. Millspaugh, Field Mus. Nat. Hist., Bot. Ser. 2:403-404. 1916.
- Euphorbia triphylla** (Klotzsch & Garcke ex Klotzsch) Oudejans, comb. nov. Basionym: *Eumecanthus triphyllus* Klotzsch & Garcke ex J.F. Klotzsch, Abh. K. Akad. Wiss. Berlin 1859(1):43. 1860.
- Euphorbia urbanii** (Millspaugh) Oudejans, comb. nov. Basionym: *Chamaesyce urbanii* Millspaugh, Field Mus. Nat. Hist., Bot. Ser. 2:412. 1916.
- Euphorbia waldsteinii** (Soják) Radcliffe-Smith subsp. *jaxartica* (Prokhanov) Oudejans, comb. nov. Basionym: *Tithymalus jazarticus* Ya.I. Prokhanov, Consp. Syst. Tithym. As. Med. 192-197. 1933.
- Euphorbia wangii** Oudejans, nom. nov., pro *E. villifera* Wentsai [=W.T.] Wang, Acta Bot. Yunnanica 10(1):42. 1988. TYPE: CHINA. Gansu: Zhouqiu, alt. 2000 m, 20 Maj 1959, *Jiang Shu & Jin Cun-li 361*. Non *E. villifera* A. Scheele, Linnaea 22:153-154. 1849.
- Euphorbia wootonii** Oudejans, nom. nov., pro *Zygophyllidium delicatulum* E.O. Wooton & P.C. Standley, Contrib. U.S. Natl. Herb. 16(4):145. 1913. TYPE: UNITED STATES. [New Mexico:] Sierra County, Mineral Creek, 2250 m, *O.B. Metcalfe 1414*. The name *delicatula* is not available in the genus *Euphorbia*.

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